

**APR/FY06**

**FORT RICHARDSON**

**Alaska**

**Army Defense Environmental  
Restoration Program  
Installation Action Plan**

Final 22 August 2006

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## Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations, necessary remedial actions, and long-term management.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Fort Richardson, executing agencies, and regulatory agencies, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this Installation Action Plan during a planning workshop held on 4 April 2006:

**Company/Installation/Branch**

ADEC

CEMML/USAGAK

DPW, FWA

Engineering and Environment, Inc. for USAEC

USAEC

USARAK

USEPA

## Acronyms & Abbreviations

<b>ADC</b>	Alaska Defense Command
<b>ADEC</b>	Alaska Department of Environmental Conservation
<b>AEDB-R</b>	Army Environmental Database - Restoration
<b>AFB</b>	Air Force Base
<b>AK</b>	Alaska
<b>BLM</b>	Bureau of Land Management
<b>CEMML</b>	Center for Environmental Management of Military Lands
<b>CERCLA</b>	Comprehensive Environmental Response Compensation and Liability Act (1980)
<b>COC</b>	Contaminants of Concern
<b>CRREL</b>	Cold Regions Research and Engineering Laboratory
<b>CTC</b>	Cost-to-Complete
<b>DRO</b>	Diesel Range Organics
<b>ER,A</b>	Environmental Restoration, Army (formerly called DERA)
<b>FFA</b>	Federal Facility Agreement
<b>FRA</b>	Fort Richardson
<b>FS</b>	Feasibility Study
<b>ft</b>	foot
<b>FTRS</b>	Fort Richardson
<b>FWA</b>	Fort Wainwright
<b>FY</b>	Fiscal Year
<b>HRR</b>	Historical Records Review
<b>IAP</b>	Installation Action Plan
<b>IMP(C)</b>	Implementation (Construction)
<b>IMP(O)</b>	Implementation (Operation)
<b>IRA</b>	Interim Remedial Action
<b>IRP</b>	Installation Restoration Program
<b>K</b>	thousand
<b>LTM</b>	Long-Term Management
<b>LUC</b>	land use controls
<b>MCL</b>	Maximum Contaminant Level
<b>MMRP</b>	Military Munitions Response Program
<b>NFA</b>	No Further Action
<b>NOV</b>	Notice of Violation
<b>NPDES</b>	National Pollution Discharge Elimination System
<b>NPL</b>	National Priorities List
<b>OB/OD</b>	open burning/open detonation
<b>OU</b>	Operable Unit
<b>PA</b>	Preliminary Assessment
<b>PBC</b>	Performance-Based Contract
<b>PCB</b>	polychlorinated biphenyl
<b>PCE</b>	tetrachloroethane
<b>POL</b>	Petroleum, Oil & Lubricants
<b>POM</b>	Program Objective Memorandum (budget)
<b>PP</b>	Proposed Plan
<b>RA</b>	Remedial Action

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## Acronyms & Abbreviations

<b>RAC</b>	Risk Assessment Code
<b>RAB</b>	Restoration Advisory Board
<b>RA(C)</b>	Remedial Action (Construction)
<b>RA(O)</b>	Remedial Action (Operation)
<b>RAO</b>	Remedial Action Objectives
<b>RC</b>	Response Complete
<b>RCRA</b>	Resource Conservation and Recovery Act
<b>RD</b>	Remedial Design
<b>REM</b>	Removal
<b>RI</b>	Remedial Investigation
<b>RIP</b>	Remedy-in-Place
<b>ROD</b>	Record of Decision
<b>RRSE</b>	Relative Risk Site Evaluation
<b>SI</b>	Site Inspection
<b>SPH</b>	Six Phase Heating
<b>SVE</b>	Soil Vapor Extraction
<b>TAPP</b>	Technical Assistance for Public Participation
<b>TCA</b>	Trichloroethane
<b>TCE</b>	Trichloroethylene
<b>TSCA</b>	Toxic Substances Control Act
<b>USACE</b>	US Army Corps of Engineers
<b>USAEC</b>	US Army Environmental Center
<b>USAG-AK</b>	US Army Garrison-Alaska
<b>USARAK</b>	US Army, Alaska
<b>USARPAC</b>	US Army, Pacific Command
<b>USEPA</b>	US Environmental Protection Agency
<b>UST</b>	Underground Storage Tank
<b>UXO</b>	Unexploded Ordnance
<b>VOCs</b>	Volatile Organic Compounds
<b>WP</b>	White Phosphorous

### AEDB-R to Alias Conversion

AEDB-R #	Alias
FTRS-01	OUD
FTRS-044	OUE
FTRS-045	OUD
FTRS-047	2PAR/2A
FTRS-09	2PTY/3A
FTRS-22	OUC/1A
FTRS-25	OUD/NFA
FTRS -39	OUB/2A
FTRS -48	NFA/OUD
FTRS -49	NFA/OUD
FTRS -50	NFA/OUD
FTRS -51	NFA/OUD
FTRS -52	NFA/OUD
FTRS -54	NFA/OUD
FTRS -58	2PTY/3A
FTRS -68	2P/3A
FTRS -89	OUE/3A

***Installation Locale:*** Fort Richardson is located within the municipality of Anchorage in South-central Alaska. The reservation occupies 64,470 acres and is bounded by the city of Anchorage (population 227,000) and Elmendorf Air Force Base to the west and by Eagle River and Knik Arm to the north. Fort Richardson's southern and eastern boundaries traverse undeveloped lands along most of their lengths, bordering Chugach State Park. Alaska Highway 1 (the Glenn Highway) bisects the post.

***Installation Mission:*** The primary missions at Fort Richardson are to provide ready combat forces to deploy rapidly in support of worldwide joint military operations, crisis response, and peacetime engagements; to maintain a quality of life and force protection platform; to field the 1st Stryker Brigade Combat Team, 25<sup>th</sup> Infantry Division; and to serve as the Joint Force Land Component in Alaska.

***Lead Organization:***

Installation Management Command, Pacific Region

***Lead Executing Agency:***

US Army Garrison-Alaska (USAG-AK)

***Regulatory Participation***

**Federal:** US Environmental Protection Agency, Region X.

**State:** Alaska Department of Environmental Conservation

***National Priorities List (NPL) Status:***

National Priority List (NPL) site

Federal Facility Agreement (FFA) signed 4th quarter, FY94

***Projected Dates for Construction Completion:*** September 2006

***Projected Date for NPL Removal:*** Unknown

***Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status:*** The RAB was established in October 1997, and has met quarterly since its inception. The RAB has not expressed any interest in participating in TAPP to date.

### ***Installation Program Summaries***

#### ***IRP***

Contaminants of Concern: Petroleum Hydrocarbons, Solvents, VOCs, White Phosphorus

Media of Concern: Groundwater, Sediments, Soils

Estimated date for RIP/RC: 2005/Indefinite

Funding to Date (thru FY05): \$76,959K

Current Year Funding (FY06): \$1,616K

Cost-to-Complete (FY07+): \$8,902K

#### ***MMRP***

Contaminants of Concern: MC

Media of Concern: Soil, Groundwater

Estimated date for RC: 2017

Funding to Date (thru FY05): \$250K

Current Year Funding (FY06): \$450K

Cost-to-Complete (FY07+): \$84,247K



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## Cleanup Program Summary

### *Installation Historic Activity*

Fort Richardson was named for the military pioneer explorer, Brig. Gen. Wilds P. Richardson, who served three tours of duty in the rugged Alaska territory between 1897 and 1917. Fort Richardson was built during 1940-1941 on the site of what is now Elmendorf Air Force Base. Fort Richardson was established under the command of the Alaskan Defense Force (ADF) to protect Alaska against foreign attack. In 1941, ADF was re-designated the Alaskan Defense Command (ADC) and was a staging and supply area during World War II. In 1943, ADC was renamed Alaskan Department, and in 1947, the Alaskan Department was reorganized as US Army, Alaska (USARAK).

In 1950, Fort Richardson was divided between the Army and Air Force. The Army established a new cantonment area in the eastern part of the installation, and the post moved to its present location five miles north of Anchorage in 1950. Three Nike missile sites were assigned to Alaska in 1959. Fort Richardson is now headquarters for United States Army Alaska (USARAK), a subordinate unit of United States Army Pacific (USARPAC), and for United States Army Garrison, Alaska (USAGAK), which provides mission and installation support for USARAK's combat forces.

Presently, the primary missions at Fort Richardson are to provide ready combat forces to deploy rapidly in support of worldwide joint military operations, crisis response, and peacetime engagements. The 172nd Stryker Brigade Combat Team, 25th Infantry Division, which represents the majority of USARAK combat forces, is located at Fort Wainwright. Fort Richardson is the primary USARAK support base. The major combat unit at Fort Richardson is the 4th Brigade Combat Team (Airborne), 25th Infantry Division. Another major unit at Fort Richardson is 425th Brigade Special Troops Battalion, 864th Engineer Battalion; 98th Maintenance Company; 95th Chemical Company; Company C, 84th Engineer Combat Battalion (Heavy) and the 534th Quartermaster Detachment.

In 1988, the US Environmental Protection Agency (USEPA) Region X placed Fort Richardson on the hazardous waste compliance docket. In 1991, the Army entered into the RCRA Federal Facilities Compliance Agreement due to improper hazardous waste storage procedures. In 1993, Fort Richardson was proposed for inclusion on the NPL, which was approved in 1994. A Federal Facilities Agreement (FFA) between USEPA and ADEC was signed in 1994, as was a companion Environmental Restoration Agreement between ADEC and the Army.

The Army has been conducting environmental cleanup since the early 1980s with the initial removal of leaking underground storage tanks (UST). That work has continued through the present time with investigation of five CERCLA operable units, and investigation of over 200 UST and other non-UST sites. The Post has developed a Community Relations Plan to assist in greater public participation in, and awareness of, environmental restoration issues at Fort Richardson.

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## Cleanup Program Summary

### **IRP**

- Prior Year Progress: Completed the OUE ROD and initiated development of the Remedial Design Work Plan. Continued operations and monitoring at Eagle River Flats (OUC). PBC was not awarded and initiated new contract actions.
- Future Plan of Action: Continue ecological monitoring at OUC. Implement ROD requirements for OUE (FTRS-044 and FTRS-89). Continue monitoring at FTRS-39 and FTRS-58. Begin investigation at FTRS-044 and develop a decision document.

### **MMRP**

- Prior Year Progress: Preliminary Assessment (PA) has been completed at all sites. A Site Investigation (SI) is underway for all sites.
- Future Plan of Action: The installation plans to complete SIs on all of the sites by 2007 and execute follow on phases/actions as required in the individual site cleanup strategies.

# FORT RICHARDSON

## INSTALLATION RESTORATION PROGRAM

**Total AEDB-R IRP Sites/AEDB-R sites with Response Complete:** 81/75

**AEDB-R Different Site Types:**

2 Fire/Crash Training Area	11 Contaminated Buildings
1 Contaminated Fill	2 Contaminated Groundwater
4 Surface Disposal Areas	2 Disposal Pit/Dry Wells
4 Storage Areas	10 Spill Site Areas
1 Above Ground Storage Tank	39 Underground Storage Tanks
2 Explosive Ordnance Disposal	3 Unexploded Munitions/Ordnance

**Contaminants of Concern:** Petroleum Hydrocarbons, Solvents, VOCs, White Phosphorus

**Media of Concern:** Groundwater, Sediments, Soils

**Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA): 1987**

IRA - FTRS-06

**1990**

IRA - FTRS-43, -57

**1991**

IRA - FTRS-02, -08, -53, -60, -64

IMP(C) - FTRS-56

**1992**

IRA - FTRS-10

**1994**

IRA - FTRS-01, -045, -29, -42, -54, -65, -66, -69, -70

IRA, RA(C) - FTRS-03, -046

RA(C) - FTRS-13, -55, -59, -62, -63, -67, -85

**1995**

IRA - FTRS-19, -41, -58

IMP(C) - FTRS-43

RA(C) - FTRS-53, -61, -72, -87

**1996**

IRA - FTRS-05, -68, -73, -74, -80, -81

RA(C) - FTRS-40, -57, -64, -65, -71, -73, -74, -75, -76, -77, -82, -83, -84

**1997**

RA(C) - FTRS-67

### 1998

RA(C) - FTRS-25, -29, -41, -69, -88

### 1999

IRA, RA(C) - FTRS-09, -22, -39,  
RA(C) - FTRS-54, -81

### 2000

RA(C) - FTRS-05

### 2001

IRA - FTRS-044

### 2005

RA(C) - FTRS-89

### ***Total IRP Funding***

Prior years (up to FY05):	\$76,959K
Current year funding (FY06):	\$ 1,616K
<u>Future Requirements (FY07+):</u>	<u>\$ 8,902K</u>
Total:	\$87,477K

### ***Duration of IRP***

Year of IRP Inception: 1987

Year of IRP RIP/RC: 2005/Indefinite

Year of IRP Completion including Long-Term Management (LTM): Indefinite

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## IRP Contamination Assessment

### ***IRP Contamination Assessment Overview***

Groundwater and soil have been impacted by contaminant releases on Fort Richardson. Past maintenance operations in motor pools, aircraft hangars, and other installation industrial operations generated the most hazardous waste on the post. Major sources of environmental concern include known or suspected releases to soil and/or groundwater of petroleum products, chlorinated solvents, white phosphorus, and PCBs. Areas on Fort Richardson impacted by this contamination include the Eagle River Flats Artillery Impact Area, Poleline Road Chemical Disposal Area (buried chemical agent identification sets and release of chlorinated solvents), two former fire training areas, fuel storage facilities, several disposal areas, and two former PCB storage sites. Approximately 37 underground storage tank (UST) sites have contributed to soil and groundwater contamination. Over the last several years, soil contaminated with petroleum or chlorinated solvents has been removed and treated via thermal desorption or thermal-enhanced soil vapor extraction. All known or suspected major sources of contamination are located in either remote, unpopulated areas of Fort Richardson, or in industrial operations areas. To date, there is no indication of off-site migration by any contaminant of concern.

Used oils, solvents, and fuel spills were reportedly discharged to the floor drains of the maintenance facilities, which either routed the materials directly to the sanitary sewer, or through an oil separator to the sanitary sewer. Spent solvents and contaminated fuels were routinely mixed with waste oils in the past. Reportedly, waste solvents were also dumped onto the ground. Waste oils, solvents, and contaminated fuels have been used for firefighter training at the fire burn pits. Waste oil USTs were installed at many of the maintenance facilities in the 1940s.

In 1994, Fort Richardson was listed on the NPL primarily due to water fowl mortalities at Eagle River Flats (OUC). A combination of preliminary source evaluations, remedial investigations/feasibility studies (RI/FS), treatability studies, removal actions, and release investigations have been completed or are underway to best address Fort Richardson's restoration needs. In general, source areas fall under the scope of one of several active interagency agreements to ensure all investigative objectives are achieved and to ensure proposed remedies adequately address stakeholder concerns. Under a Federal Facility Agreement between the Army, EPA, and state of Alaska, signed in 1994, 18 source areas have been grouped into five operable units. In addition, 20 source areas of known or suspected petroleum (non-UST) contamination have been investigated in accordance with a companion Environmental Restoration Agreement between Alaska and the Army (Two Party Agreement), also signed in 1994. In total, 20 (non-UST) and 42 (UST) sites under the Two Party Agreement (there were 2 agreements; 1 for USTs, 1 for non-UST POL contamination) were investigated. Based on the results of preliminary source evaluations and remedial investigations conducted to date, several source areas from either the operable units or from previous underground storage tank investigations have been incorporated into the non-UST Two Party Agreement.

A law suit concerning the firing of munitions at the Eagle River Flats Impact Area resulted in a settlement agreement signed in 2002. In addition, the Army submitted an application for an NPDES permit for the impact area and began off-shore sampling for munitions constituents.

### ***IRP Cleanup Exit Strategy***

FRA continues to work toward the closure of sites by evaluating operations data, monitoring results, and other changes in site and field conditions on a quarterly basis. These results are discussed with the regulators, and agreements are reached as to reductions in operations, decreases in monitoring parameters and quantities, etc. The Federal Facility Agreement meeting notes and annual reports relating to the respective sites set forth these negotiated agreements.

The Army has adopted the 'Cleanup Operations and Site Exit Strategy' (CLOSES) format as a way to evaluate sites and determine the next step, whether it be continued operations, reduced monitoring, or site closure. This model was presented at the DERA Conference in November 2004 as an easily-adaptable formula which can result in significant cost savings. The Army will continue to use these methods to ramp down cleanup operations at the FRA installation.

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# FORT RICHARDSON

## Installation Restoration Program Site Descriptions

# IMPACT AREA (EAGLE RIVER FLATS) (PAGE 1 OF 2)

## SITE DESCRIPTION

FTRS-22 is located in the northwest sector of Fort Richardson and comprises 2,160 acres of estuarine salt marsh at the mouth of Eagle River. The site has been used as the primary ordnance impact area for Fort Richardson since the mid-1940s. During spring and fall migrations, Eagle River Flats is an important staging ground for numerous species of waterfowl, including ducks, geese and swans, with populations exceeding 5,000 waterfowl.

Large scale waterfowl mortality during migratory periods was observed in the 1980s and was proven to be a result of white phosphorus poisoning. White phosphorus projectiles were one of the munitions types fired into the flats by the Army. Unoxidized pellets of the white phosphorus remained in the marsh sediments, and were eaten by the dabbling ducks, resulting in death.

The remedial action objective (RAO) for Eagle River Flats was to reduce duck mortality due to white phosphorus. The short-term RAO (within 5 years of signing the ROD) was to reduce duck mortality rate attributable to white phosphorus to 50 percent of the 1996 mortality rate (about 500 deaths). The long-term RAO (within 20 years of signing the ROD) is to reduce duck mortality to no more than 1% of the total fall population of dabbling Eagle River Flats ducks (about 50 deaths). The objectives will be achieved by reducing white phosphorus contamination in the ponds.

The selected remedy in the ROD was pumping (to drain ponds sufficiently to allow the sediments to dry such that the white phosphorus either sublimates or oxidizes) with potential capping and filling. During each field season, 6 pumping systems have been placed into contaminated ponds and operated to drain water from the ponds.

Sampling activities have been performed each season to determine the extent that white phosphorus is being reduced, and to locate new pond areas that may require remediation. Duck mortality studies have been conducted annually (except 2001, due to contract conflicts, and 2003) to determine an approximate number of deaths attributable to WP contamination. Currently, data indicates that the short-term RAO has been achieved.

Sampling activities at the ponds show a dramatic decrease in WP concentrations. The 7th year of post-ROD remedial activities was completed in FY05. In FY04, the mortality model was refined to be more representative of the impact of white phosphorous contamination.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RRSE:** High

**CONTAMINANTS OF CONCERN:**  
White Phosphorus

**MEDIA OF CONCERN:**  
Sediments

PHASES	Start	End
PA .....	198905 .....	199102
SI .....	198905 .....	199102
RI/FS .....	199102 .....	199710
IRA .....	199102 .....	199712
RA(C) .....	199705 .....	199908
<b>RA(O) .....</b>	<b>199810 .....</b>	<b>202809</b>

**RIP:** 199908

**RC:** 202809

## **IMPACT AREA (EAGLE RIVER FLATS) (PAGE 2 OF 2)**

Limited pond pumping in hot spot areas was conducted in FY04-FY06. Several small areas of white phosphorous contamination remain to be treated.

A law suit concerning the firing of munitions at Eagle River Flats resulted in a settlement agreement that could impact future actions.

Included in FTRS-22 is a 20-acre gravel pad where disposal of outdated munitions occurred. This site is commonly referred to as the OB/OD area and is located on the eastern boundary of Eagle River Flats. The Record of Decision was signed in September, 1998, which required no further CERCLA action for this area. This OB/OD area will undergo an administrative closure under RCRA due to the OB/OD activities when the operational range closes.

### **CLEANUP STRATEGY**

Bird mortality studies will be conducted periodically to monitor long-term effectiveness of treatment, and to determine when the long-term RAO has been met. Limited pond pumping will be conducted in FY06 in a localized area. Areas that can not be treated by pumping will be capped with gravel. In addition, a study will be completed to assess how the treatments at the site have affected the habitat. The white phosphorous sampling and land use controls will continue until FY18. Future land use controls will be maintained as part of the active range operations.

# POLELINE ROAD DISPOSAL AREA (PAGE 1 OF 2)

## SITE DESCRIPTION

The Poleline Road Disposal Area was active from approximately 1950 to 1972. Disposal materials included chemical agent identification sets, smoke bombs, Japanese cluster bombs, and neutralizers such as solvents (primarily 1,1,2,2-tetrachloroethane) and bleach. A removal action in the summer of 1994 encountered chemical agent identification sets and solvent-contaminated soil. The remedial investigation conducted in the summer of 1995 delineated solvent-contaminated soil and groundwater that require remedial action. Residual chemical agent is not a contaminant of concern.

An initial groundwater model has been developed and shows that the hot spot as designated in the ROD was the only likely source area at the site. A ROD for the site was signed in 1997. The selected remedy was high vacuum extraction for the hot spot, enhanced (e.g., heat) as appropriate. Semi-annual long-term groundwater monitoring began in FY98. Multiple treatability studies were conducted from 1997-99. Six-phase heating (SPH) removed the majority of the contamination from the soil.

Although the contaminant levels in groundwater have been reduced, they still exceed the RAOs for some COCs. Based on existing knowledge however, contaminant transport away from the site is an extremely slow process, such that natural attenuation and long-term monitoring together represent a protective course of action. Due to the complex geology of the site, development of a site-specific model has been initiated to better understand the contaminant transport.

In a separate action, residual chemical agent identification sets material was treated (through the Rapid Response System developed by the project manager for Non-Stockpile Chemical Materiel) and disposed of in 2003.

In the summer 2003, pure solvent was detected in two wells at the western edge of the hot spot. Additional groundwater and soil samples were taken to better define the solvent contamination. The dissolved phase plume covers an area of ~3 acres and is ~600 ft long. In late 2004, the updated groundwater model was completed and potential munitions burial areas were fenced to implement the institutional controls.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RRSE:** Medium

**CONTAMINANTS OF CONCERN:**  
Solvents (TCE, TCA, PCE)

**MEDIA OF CONCERN:** Soil,  
Groundwater

PHASES	Start	End
PA.....	198910 .....	199005
SI.....	199005 .....	199102
RI/FS .....	199508 .....	199709
RD .....	199709 .....	199809
IRA .....	199309 .....	199906
RA(C) .....	199905 .....	199906
RA(O) .....	199906 .....	203709

**RIP:** 199906

**RC:** 203709

## POLELINE ROAD DISPOSAL AREA (PAGE 2 OF 2)

A tracer study was completed in summer FY05 to better characterize flow at the site. A SVE treatability study was completed during FY05 in the area where pure solvent was discovered. The results indicated that SVE is effective in this area.

### CLEANUP STRATEGY

The SVE operations will be continued for as long as it continues to be effective. The extent and flow pathway of the plume are still not completely defined, and additional wells will be installed in FY06 to ensure contaminants have not migrated downgradient. Geophysical studies (FY06 funding) will be conducted to identify any remaining source areas. Limited soil excavation and treatment may result. Establish a groundwater monitoring program to assure natural attenuation is occurring and the plume is stable and not expanding. Natural attenuation with monitoring is expected to continue indefinitely.

# FTRS-044 PCB SITE 35-752

## SITE DESCRIPTION

FTRS-044 (Bldg 35-752) is located in the relatively undeveloped western area of Fort Richardson. The facility is the former generator building for the adjacent high frequency antenna transmitter site. Building 35-750 housed generators from 1953 until 1987.

Oil containing PCBs was released at the site during removal of transformers associated with the operation of the generator facility. This oil was reportedly burned at the site. This site had PCB and POL contamination in the surface and subsurface soil, and PCBs, VOC and POL contaminants in groundwater. In 2001, a PCB-contaminated soil stockpile (generating from construction activities) was excavated and transported by rail for disposal at a TSCA permitted landfill in Idaho (under a DD).

In 1990, seven USTs were excavated from the south side of the building. The tanks were used to store diesel fuel for the generators. During closure, petroleum hydrocarbon contamination was found in the excavated soil and treated.

In 1995, another UST was discovered near this facility, and was removed in June 1996. Soils at the site contained DRO up to 6,800 ppm, total recoverable petroleum hydrocarbons up to 23,600 ppm, and PCBs up to 3.5 ppm. This soil was removed and treated.

In FY04, the RI/FS and PP were completed as part of OUE. Limited soil removal (PCBs) was completed in late 2004 to meet ADEC and TSCA requirements. The ROD was signed in September 2005. Under current and expected future land use, there is no unacceptable risk; however TCE in groundwater exceeds the MCL. No further remedial action was required, but monitoring will continue as part of the five-year reviews.

Should Building 35-750 be demolished for other purposes, there may be additional disposal costs related to contaminated debris and underlying contaminated soil. It is presently expected that these associated costs will be paid from facility reduction funds.

## CLEANUP STRATEGY

The groundwater monitoring will continue as part of the five-year reviews until 2027, assuming MCLs are met for TCE.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RRSE:** Low

**CONTAMINANTS OF CONCERN:**  
VOCs

**MEDIA OF CONCERN:**  
Groundwater

PHASES	Start	End
PA .....	199409 .....	199504
SI .....	199409 .....	199504
RI/FS .....	199506 .....	200409
IRA .....	199409 .....	200109
LTM .....	200409 .....	202709

**RC:** 200409

# FTRS-047 NIKE SITE SUMMIT

## SITE DESCRIPTION

Nike Site Summit is located on the southwestern flank of Mt. Gordon Lyon at an elevation of 3,500 to 3,900 feet above sea level, approximately five miles east of the Fort Richardson cantonment area. The site consists of numerous buildings, foundations, roads, ammunition bunkers, missile launch pads, underground storage tanks, and landfills associated with the former Nike missile site. The facilities are scattered over an area which may be as large as one square mile. The site was active from 1959 to 1979. All known USTs were removed between 1994 and 1996.

The PA/SI results for FTRS-047 indicate that petroleum and possibly VOCs are the contaminants of concern.

## CLEANUP STRATEGY

Complete the RI/FS. Soil removal, cover and groundwater monitoring may be required.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RRSE:** Medium

**CONTAMINANTS OF CONCERN:**  
Petroleum Hydrocarbons, VOCs

**MEDIA OF CONCERN:** Soil,  
Groundwater

PHASES	Start	End
PA .....	199508 .....	199508
SI .....	199508 .....	199608
RI/FS.....	199704 .....	200905
RA(C) .....	200805 .....	201005
LTM.....	201005 .....	202809

**RC:** 201005



# FTRS-58

## BUILDING 762, UST 19 & 20

### SITE DESCRIPTION

This area consists of two adjacent sites, Bldg 762 and Bldg 786. Bldg 762 was the site of a GSA gasoline station and is located east of the intersection of C and Second Streets in the main industrial area of Fort Richardson. A bioventing/air sparging system was installed in 1994. The interim remedial report indicated the system was ineffective and it was decommissioned. Two leaking USTs at Bldg 762 were removed in July 1995. Benzene remains above cleanup levels in one well.

The Bldg 786 site was discovered during installation of a monitoring well for the Bldg 762 site. The Bldg 786 site consists of soil and groundwater contamination over a 3-acre area. Sampling in FY03 detected DRO contamination to a depth of 80 ft bgs. This site is included in the Two-Party UST Agreement.

In FY04, the RI was completed but a decision document has not been finalized. The soil contamination covers an area ~50 x 400 ft and is from 8 ft to ~80 ft bgs. The plume covers an area of ~600 ft long. There do not appear to be any receptors.

### CLEANUP STRATEGY

Damaged groundwater monitoring wells will be replaced. Groundwater monitoring will continue to verify that the plume is stable. Institutional controls are in place and will continue. Groundwater monitoring will continue until MCLs are reached.

### STATUS

**REGULATORY DRIVER:** CERCLA

**RRSE:** Medium

**CONTAMINANTS OF CONCERN:**  
Petroleum Hydrocarbons

**MEDIA OF CONCERN:** Soil,  
Groundwater

PHASES	Start	End
PA .....	198708 .....	198710
SI .....	198708 .....	198710
RI/FS.....	199306 .....	200509
IRA.....	198805 .....	199510
RA(C).....	200510 .....	200510
RA(O).....	200510 .....	203709

**RIP:** 200510

**RC:** Indefinite

## ARMORED VEHICLE MAINTENANCE AREA

### SITE DESCRIPTION

This site is part of OUE and consists of a solvent-contaminated groundwater area. After considerable effort during the OUE RI, (aerial photos, records search, employee interviews, field work), a source of this contamination has not been found.

Based on investigations, the primary medium of concern at this site is groundwater where carbon tetrachloride and PCE were detected.

In FY04, the RI/FS and PP were completed. The risk assessment indicates unacceptable risk for unrestricted use and the contaminants in groundwater exceed MCLs. A ROD was signed in September 2005. The remedy selected for this site is natural attenuation with monitoring and institutional controls.

### CLEANUP STRATEGY

Groundwater monitoring and land use controls will continue indefinitely.

### STATUS

**REGULATORY DRIVER:** CERCLA

**RRSE:** Low

**CONTAMINANTS OF CONCERN:**  
VOCs

**MEDIA OF CONCERN:**  
Groundwater

PHASES	Start	End
PA .....	199609.....	199912
SI.....	199609.....	199912
RI/FS .....	200002.....	200409
RA(C) .....	200409.....	200509
RA(O) .....	200509.....	203709

**RIP:** 200509

**RC:** Indefinite

## IRP No Further Action Sites Summary

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
FTRS-01	BUILDING 796, OU-D	Study completed, no cleanup required. GW sampling found no contamination	200009
FTRS-02	PRINT SHOP (BLDG 908 NORTH) UST 33	All required cleanups completed. Received state concurrence.	199402
FTRS-03	BLDG 756, UST 18	All required cleanups completed. Received state concurrence.	199411
FTRS-04	BLDG 760 TMP	All required cleanups completed. Received state concurrence.	199403
FTRS-05	BLDG 45-590 UST SITE	All required cleanups completed. Received state concurrence.	200003
FTRS-06	BLDG 740, UST 14	All required cleanups completed. Duplicate site (FTRS-64)	199407
FTRS-07	BLDG 794 CANNIBALIZATION YARD	Study completed; no cleanup required. Received state concurrence.	199809
FTRS-08	BLDG 812, UST 32	All required cleanups completed. Received state concurrence.	199107
FTRS-09	BLDG 986, POL DRY WELL	All required cleanups completed. Received state concurrence.	200309
FTRS-10	BLDG 986, UST 44	All required cleanups completed. Received state concurrence.	199403
FTRS-11	BLDG 634 DENTAL LAB	All required cleanups completed. Received state concurrence.	199311
FTRS-12	BLDG 604 TMC	All required cleanups completed. Received state concurrence.	199311
FTRS-13	MAIN SHOP (BLDG T-45, UST 726)	All required cleanups completed. Received state concurrence.	199407
FTRS-14	Main Shop (Bldg 775, 47-433, 47-220)	Study completed; no cleanup required. Received state and EPA concurrence.	199403
FTRS-15	Main Shop (Bldg 47-43, 47-432, 792, 636)	Study completed; no cleanup required. Received state and EPA concurrence.	199403
FTRS-16	MAIN SHOP(BLDG 700)	Study completed; no cleanup required. Received state and EPA concurrence.	199403

## IRP No Further Action Sites Summary (cont.)

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
FTRS-17	MAIN SHOP (BLDG 804)	All required cleanups completed. Received state concurrence.	199403
FTRS-18	TASO PHOTO LAB (BLDG 652)	Study completed; no cleanup required. Received state and EPA concurrence.	199311
FTRS-19	ARTS & CRAFTS SHOP (BLDG 755)	Study completed; no cleanup required. Received state concurrence.	199509
FTRS-20	RANGE (A,B,C,D,E,F,MCLAUGHLIN)	Not DERA eligible.	199311
FTRS-21	RANGE (GREZELKA,DAVIS)	Not DERA eligible.	199311
FTRS-23	EOD AREA (2 EA)	All required cleanups completed. Site combined with FTRS-22	198708
FTRS-24	PESTICIDE STORAGE (BLDG 720,719,701,802)	Study completed; no cleanup required. Received state and EPA concurrence.	199311
FTRS-25	BLDG 700 FORMER DRUM STORAGE AREA	All required cleanups completed. Received state concurrence.	199806
FTRS-26	RAD MAT DISPOSAL FACILITY(STG PAD 45886)	Study completed; no cleanup required. Received state and EPA concurrence.	199311
FTRS-27	BAAF FUEL STORAGE AREA	Study completed; no cleanup required. Received state and EPA concurrence.	199511
FTRS-28	TRUCK FILLING STANDS (900 BLOCK)	Study completed; no cleanup required. Received state and EPA concurrence.	199403
FTRS-29	RUFF ROAD FIRE TRAINING AREA	All required cleanups completed. Received state concurrence.	200102
FTRS-40	UST SOIL PILES	All required cleanups completed. Received state concurrence.	199609

## IRP No Further Action Sites Summary (cont.)

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
FTRS-41	ROOSEVELT ROAD PCB	All required cleanups completed. Received state concurrence. IC in Place	199809
FTRS-42	CIRCLE ROAD DRUM SITE	Study completed; no cleanup required. Received state concurrence. IC in Place	199604
FTRS-43	BLDG 710, USTS	All required cleanups completed.	199506
FTRS-045	Bldg 726 LAUNDRY	All required cleanups completed. Received state concurrence.	199809
FTRS-046	Bldg 750, UST 15 & 16	All required cleanups completed. Received state concurrence.	199405
FTRS-48	BLDG 704 DRUM STORAGE AREA	All required cleanups completed. Received state concurrence.	199504
FTRS-49	DUST PALLIATIVE	Study completed; no cleanup required. Received state and EPA concurrence.	199504
FTRS-50	STORM DRAINAGE OUTFALL TO SHIP CREEK	Study completed; no cleanup required. Received state and EPA concurrence.	199504
FTRS-51	GREASE PITs #1 & #2	Study completed; no cleanup required. Received state and EPA concurrence.	199504
FTRS-52	LANDFILL FIRE TRAINING AREA	All required cleanups completed. Received state concurrence.	199504
FTRS-53	BLDG 47811, UST 71 & 72	All required cleanups completed. Received state concurrence.	199809
FTRS-54	BLDG 955	All required cleanups completed. Received state concurrence.	199909
FTRS-55	BLDG 36012, UST 56	All required cleanups completed. Received state concurrence.	199405
FTRS-56	BLDG 47641	Study completed; no cleanup required. Received state and EPA concurrence. IC in Place	199411
FTRS-57	BLDG 47662, UST 89, 90, & 91	All required cleanups completed. IC in place	199605
FTRS-59	BLDG 782, UST 23 & 24	All required cleanups completed. Received state concurrence.	199411
FTRS-60	BLDG 712	All required cleanups completed. Received state concurrence.	199809

## IRP No Further Action Sites Summary (cont.)

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
FTRS-61	BLDG 798, UST 30A & 30B	All required cleanups completed. Received state concurrence.	199509
FTRS-62	BLDG 732, UST 13 & 13A	All required cleanups completed. Received state concurrence. IC in Place	199406
FTRS-63	BLDG 27004, UST 47	All required cleanups completed. Received state concurrence.	199407
FTRS-64	BLDG 740, UST 14	All required cleanups completed. Received state concurrence. IC in Place	199610
FTRS-65	BLDG 8102, UST 46	All required cleanups completed. Received state concurrence.	199607
FTRS-66	BLDG 975, UST 38	All required cleanups completed. Received state concurrence. IC in Place	199609
FTRS-67	BLDG 920, UST 95	All required cleanups completed. Received state concurrence.	199407
FTRS-68	BLDG 702, UST 4	All required cleanups completed. Received state concurrence. IC in Place	199710
FTRS-69	BLDG 47203, UST 93	All required cleanups completed. Received state concurrence. IC in Place	199810
FTRS-70	BLDG 934, UST 98	All required cleanups completed. Received state concurrence.	199603
FTRS-71	BLDG 962, UST 105	All required cleanups completed. IC in place	199603
FTRS-72	BLDG 908 SOUTH, UST 82	All required cleanups completed. IC in place	199809
FTRS-73	BLDG 936, UST 99; BLDG 944, UST 100	All required cleanups completed. Received state concurrence.	199603
FTRS-74	BLDG 950/UST 101; B952,U103; B956, U104	All required cleanups completed. Received state concurrence. IC in place.	199610
FTRS-75	BLDG 932, UST 97	All required cleanups completed. Received state concurrence. IC in place.	199603
FTRS-76	BLDG 946, UST 101	All required cleanups completed. Received state concurrence. IC in place.	199603

## IRP No Further Action Sites Summary (cont.)

AEDB-R#	Site Title	Documentation/Reason for NFA	NFA Date
FTRS-77	BLDG 926, UST 96	All required cleanups completed. Received state concurrence. IC in place.	199603
FTRS-78	BLDG 47431, AIRCRAFT MAINT FACILITY	All required cleanups completed. Received state concurrence.	199510
FTRS-79	RESERVE CENTER FACILITY-SEWER LINE	Study completed; no cleanup required. Received state and EPA concurrence.	199610
FTRS-80	BLACK SPRUCE TRAVEL CAMP DRUM SITE	Study completed; no cleanup required. Received state and EPA concurrence.	199610
FTRS-81	FORMER FUEL STR BLDG 987,	Not DERA eligible.	199912
FTRS-82	BLDG 968, UST 34	All required cleanups completed. Received state concurrence. IC in place.	199603
FTRS-83	BLDG 914, UST 137	All required cleanups completed. Received state concurrence. IC in place.	199603
FTRS-84	BLDG 39600, UST 57	All required cleanups completed. Received state concurrence.	199603
FTRS-85	BLDG 972, UST 106	All required cleanups completed. Received state concurrence.	199409
FTRS-86	BLDG 28008, UST 48 & 49	Not DERA eligible.	199809
FTRS-87	BLDG 59011, UST 119	Study completed; no cleanup required. Received state concurrence.	199508
FTRS-88	BUILDING 45070, UST 136	All required cleanups completed. Awaiting state concurrence.	199807



**Initiation of IRP:** 1987

***Past Phase Completion Milestones (active sites only)***

**1987**

PA/SI - FTRS-58, Oct

**1990**

PA - FTRS-39, May

**1991**

PA/SI - FTRS-22, Feb

SI - FTRS-39, Feb

**1995**

PA/SI - FTRS-044, Apr

PA - FTRS-047, Aug

IRA - FTRS-58, Oct

PA - PBC Richardson, Sep

**1996**

SI - FTRS-047, Aug

**1997**

RI/FS - FTRS-22, Oct

RI/FS - FTRS-39, Sep

**1998**

RD - FTRS-39, Sep

**1999**

IRA, RA(C) - FTRS-22, Aug

IRA, RA(C) - FTRS-39, Jun

PA/SI - FTRS-89, Dec

**2001**

IRA - FTRS-044, Sep

**2004**

RI/FS - FTRS-044, Sep

RI/FS - FTRS-89, Sep

**2005**

RI/FS - FTRS-58, Sep

RA(C) - FTRS-89, Sep

**2006**

RI/FS - FTRS-047, Sep

***Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates:*** 2005/07

***Projected Construction Completion Date of NPL:*** 2006

***Projected Date for Removal from NPL:*** Unknown

***Schedule for Next Five-Year Review:*** 2008

***Estimated Completion Date of IRP (including LTM phase):*** Indefinite

# Fort Richardson IRP Schedule

(Based on current funding constraints)

AEDB-R #	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
FTRS-22	RA(O)									202809
FTRS-39	RA(O)									203709
FTRS-044	LTM									202709
FTRS-047	RI/FS									
	RA(C)									
	LTM									202809
FTRS-58	RA(O)									203709
FTRS-89	RA(O)									203709

***Prior Years Funds*****Total Funding up to FY04: \$75,081K**

Year	Site Information	Expenditures	FY Total
<b>FY05:</b>		\$1,878K	<b>\$1,878K</b>
<b>Total Funding up to FY05: \$76,959K</b>			

***Current Year Requirements***

Year	Site Information	Expenditures	FY Total
<b>FY06:</b>		\$1,616K	<b>\$1,616K</b>
<b>Total Funding FY06: \$1,616K</b>			

***Total Future Requirements: \$8,902K******Total IR Program Cost (from inception to completion of the IRP): \$87,477K***

# FORT RICHARDSON

## Military Munitions Response Program

**Total AEDB-R MMRP Sites/AEDB-R Sites with Response Complete:** 12/0

**AEDB-R Site Types**

10 Firing Ranges                      2 Small Arms Ranges

**Most Widespread Contaminants of Concern:** MC

**Media of Concern:** Soil, Groundwater

**Completed REM/IRA/RA:** None

**Total MMRP Funding**

Prior years (up to FY05):	\$ 250K
Current Year (FY06):	\$ 450K
<u>Future Requirements (FY07+):</u>	<u>\$84,247K</u>
Total:	\$84,947K

**Duration of MMRP**

Year of MMRP Inception: 2002

Year of MMRP RC: 2017

Year of MMRP Completion Including LTM: 2047

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## MMRP Contamination Assessment

### ***MMRP Contamination Assessment Overview***

Their CTT Range/Site Inventory Report was completed in September 2002. Currently a SI is being conducted on all the sites. The HRR has been completed.

### ***MMRP Cleanup Exit Strategy***

The installation plans to complete SIs on all of the sites by 2007 and execute follow on phases/actions as required in the individual site cleanup strategies.



### 2002

- Final US Army Closed, Transferring and Transferred Range/Site Inventory for Fort Richardson, Alaska, TechLaw, Inc., Sep

# FORT RICHARDSON

## Military Munitions Response Program Site Descriptions

# FTRS-001-R-01

## MORTAR RANGE 2A

### SITE DESCRIPTION

The size of this range has been estimated at 33,185 acres. The majority of this range is open water. The remaining portion includes Knik Lake, used by fisherman, and the town of Knik. It is estimated, based on historical maps, that this range was used in the 1960s through 1980.

This transferred range is a combination of several former ranges, and includes two ranges called McLaughlin Range that varied in size over the years and a tank training range. All three of these have the same firing point, which is located within the operational area. The other two ranges were the Cole Range and the Moore Range. The firing points for these two ranges were also located within the operational area. The range fans for all of these ranges extended to the north, beyond the current installation boundaries, and with one exception, ended over the water of Knik Arm. At one point, one of the McLaughlin ranges extended across Knik Arm and onto the property opposite Fort Richardson. The impact area for the ranges was located in the center of the water between Fort Richardson and the other side of Knik Arm. These ranges were also used for artillery purposes.

### CLEANUP STRATEGY

Additional investigation is planned. MC and soil removal, followed by LUCs, may be required.

### STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Negligible Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil,  
Groundwater

PHASES	Start	End
PA.....	200203 .....	200305
SI.....	200510 .....	200709
RI/FS .....	201410 .....	201509
RD .....	201510 .....	201609
RA(C) .....	201610 .....	201709
LTM .....	201710 .....	204709

**RC: 201709**

# FTRS-002-R-01 MORTAR RANGE 1A

## SITE DESCRIPTION

It is estimated that the range was used between 1960 and 1984. The range remains an open waterway. The size of this range has been estimated at 12,161 acres.

This transferred range is a combination of two mortar ranges that overlap. The firing points for both of these ranges are within the operational area. One range fan extends north with an impact area that falls partially within the operational area and partially in the water of Knik Arm. The second range fan extends to the northwest and covers the majority of the first range fan. A small portion of this second range fan extends over the northern end of Elmendorf (AFB) and was excluded from the Phase 3 CTT Inventory.

## CLEANUP STRATEGY

Additional investigation is planned. MC and soil removal, followed by LUCs, may be required.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Low Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203.....	200305
SI.....	200510.....	200709
RI/FS.....	201410.....	201509
RD.....	201510.....	201609
RA(C) .....	201610.....	201709
LTM.....	201710.....	204709

**RC: 201709**

# FTRS-003-R-01

## GREZELKA MACHINE GUN RANGE

### SITE DESCRIPTION

This area is open range that is now part of Chugach State Park. The size of this range has been estimated at 92 acres. It is estimated that the range was used from the 1960s to the early 1980s. A smaller version of the range is still in use.

The firing point for this transferred range was located within the operational area and the range continued southeast with the end extending on to property that is owned by the BLM. This property was used under permit with BLM. The permits have expired and the Army considers the property to be released. According to interviewees, the BLM does not want to accept the return of the property because it has not been cleared to the satisfaction of the BLM. It was noted that there is the possibility that the Army will decide to renew the permit for this property.

### CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

### STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Low Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA.....	200203 .....	200305
SI.....	200510 .....	200709
RI/FS .....	201410 .....	201509
RD .....	201510 .....	201609
RA(C) .....	201610 .....	201709

**RC: 201709**

# FTRS-004-R-01

## MCGEE MACHINE GUN RANGE

### SITE DESCRIPTION

It is estimated that the range was used from the 1960s to the early 1980s. A smaller version of the range is still in use. This area is open range that is now part of Chugach State Park. The size of this range has been estimated at 49 acres.

The firing point for this transferred range was located within the operational area and the range continued southeast with the end extending on to property that is owned by the BLM. This property was used under permit with BLM. The permits have expired and the Army considers the property to be released. According to interviewees, the BLM does not want to accept the return of the property because it has not been cleared to the satisfaction of the BLM. It was noted that there is the possibility that the Army will decide to renew the permit for this property.

### CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

### STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Negligible Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203 .....	200305
SI .....	200510 .....	200709
RI/FS .....	201410 .....	201509
RD .....	201510 .....	201609
RA(C) .....	201610 .....	201709

**RC: 201709**

# FTRS-005-R-01

## MAHON MACHINE GUN RANGE

### SITE DESCRIPTION

The size of this range has been estimated at 1,205 acres. It is estimated that the range was used from the 1960s to the early 1980s. Based on the label on a 1983 map, this range may also have been used for 81 mm mortar and M-31 rifle grenades. A smaller version of the range is still in use. This area is open range that is now part of Chugach State Park.

The firing point for this transferred range was located within the operational area and the range continued southeast with the end extending on to property that is owned by the BLM. This property was used under permit with BLM. The permits have expired and the Army considers the property to be released. According to interviewees, the BLM does not want to accept the return of the property because it has not been cleared to the satisfaction of the BLM. It was noted that there is the possibility that the Army will decide to renew the permit for this property.

### CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

### STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Negligible Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA.....	200203 .....	200305
SI .....	200510 .....	200709
RI/FS .....	201410 .....	201509
RD .....	201510 .....	201609
RA(C).....	201610 .....	201709

**RC: 201709**



# FTRS-006-R-01 DAVIS RANGE A

## SITE DESCRIPTION

This transferred range is part of the same range fan that was split by the operational area. This site was used as a rifle range in the 1960s. This area is open range that is now part of Chugach State Park. The size of this range has been estimated at 8,859 acres.

Maps from the 1980s depict a smaller range, contained completely within the operational area. This property was used under permit with BLM. The permits have expired and the Army considers the property to be released. According to interviewees, the BLM does not want to accept the return of the property because it has not been cleared to the satisfaction of the BLM. It was noted that there is the possibility that the Army will decide to renew the permit for this property.

## CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Negligible Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203 .....	200305
SI .....	200510 .....	200709
RI/FS .....	201410 .....	201509
RD .....	201510 .....	201609
RA(C) .....	201610 .....	201709

**RC: 201709**

FTRS-007-R-01  
RIFLE RANGE

SITE DESCRIPTION

The size of this range has been estimated at 92 acres.

This closed rifle range is depicted on a 1942 Real Estate map and on a 1948 map. The two locations depicted overlap, but do not match exactly. It was decided the two locations would be combined based on the fact that they overlap, were shown during the same time period, and were both rifle ranges. Neither of these locations is depicted on any of the maps from the 1960s. This range is now within the cantonment area.

CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

STATUS

REGULATORY DRIVER: CERCLA

RAC Score: Negligible Risk

CONTAMINANTS OF CONCERN:  
MC

MEDIA OF CONCERN: Soil

PHASES	Start	End
PA.....	200203 .....	200305
SI.....	200510 .....	200709
RI/FS .....	201410 .....	201509

RC: 201509

# FTRS-008-R-01 MORTAR RANGE 2B

## SITE DESCRIPTION

The size of this range has been estimated at 201 acres. It is estimated that it was used from the 1960s through 1980 based on the maps that were located.

This closed range is an extension of the range area for the Cole Range described under Mortar Range 2A and it is located within the non-operational area. It is an area behind the firing point. This may also have been used for artillery firing. A portion of this site is used as a wildlife and recreation area.

## CLEANUP STRATEGY

Additional investigation is planned. MC and soil removal, followed by LUCs, may be required.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Serious Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203.....	200305
SI .....	200510.....	200709
RI/FS.....	201410.....	201509
RD.....	201510.....	201609
RA(C).....	201610.....	201709
LTM.....	201710.....	204709

**RC: 201709**

# FTRS-009-R-01 MORTAR RANGE 1B

## SITE DESCRIPTION

It is estimated that the range was used between 1960 and 1980. The site remains an open waterway. The size of this range has been estimated at 0.01 acres.

This is a small area at the base of one of the range fans referenced in Mortar Range 1A and falls within the non-operational area and extends north over Knik Arm. It is separated from the rest of the range fan by the operational area and is considered a closed range.

## CLEANUP STRATEGY

Additional investigation is planned. MC and soil removal, followed by LUCs, may be required.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Low Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203.....	200305
SI .....	200510.....	200709
RI/FS.....	201410.....	201509
RD.....	201510.....	201609
RA(C).....	201610.....	201709
LTM.....	201710.....	204709

**RC: 201709**

# FTRS-010-R-01 MORTAR RANGE 1C

## SITE DESCRIPTION

The size of this range has been estimated at 10 acres. It is estimated that the range was used between 1960 and 1980.

This is a small area at the base of the second range fan referenced in Mortar Range 1A and falls within the non-operational area and extends northwest over Knik Arm. It is separated from the rest of the range fan by the operational area and is considered a closed range. This site remains an open waterway.

## CLEANUP STRATEGY

Additional investigation is planned. MC and soil removal, followed by LUCs, may be required.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Low Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203.....	200305
SI.....	200510.....	200709
RI/FS.....	201410.....	201509
RD .....	201510.....	201609
RA(C) .....	201610.....	201709
LTM.....	201710.....	204709

**RC: 201709**

# FTRS-011-R-01 PISTOL RANGE

## SITE DESCRIPTION

This closed range is a small arms range located in the current cantonment area. It was identified on a map from the 1940s and none of the interviewees had information regarding its use. This range is now within the cantonment area. The size of this range has been estimated at 1 acre.

## CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Negligible Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA.....	200203 .....	200305
SI .....	200510 .....	200709
RI/FS .....	201010 .....	201109
RD .....	201510 .....	201609
RA(C).....	201610 .....	201709

**RC: 201709**

# FTRS-012-R-01 DAVIS RANGE B

## SITE DESCRIPTION

The size of this range has been estimated at 163 acres.

This transferred range is part of the same range fan that was split by the operational area. This site was used as a rifle range in the 1960s. Maps from the 1980s depict a smaller range, contained completely within the operational area. This property was used under permit with BLM. The permits have expired and the Army considers the property to be released. According to interviewees, the BLM does not want to accept the return of the property because it has not been cleared to the satisfaction of the BLM. It was noted that there is the possibility that the Army will decide to renew the permit for this property. This area is open range that is now part of Chugach State Park.

## CLEANUP STRATEGY

Additional investigation is planned. Soil removal may be needed.

## STATUS

**REGULATORY DRIVER:** CERCLA

**RAC Score:** Negligible Risk

**CONTAMINANTS OF CONCERN:**  
MC

**MEDIA OF CONCERN:** Soil

PHASES	Start	End
PA .....	200203 .....	200305
SI .....	200510 .....	200709
RI/FS .....	201010 .....	201109
RD .....	201510 .....	201609
RA(C) .....	201610 .....	201709

**RC: 201709**



***Initiation of MMRP:*** 2002

***Past Phase Completion Milestones***

**2003**

- PA - All Sites, May

***Projected ROD/DD Approval Dates:*** Unknown

***Projected Construction Completion:*** 2017

***Schedule for Five-Year Reviews:*** 2022

***Estimated Completion Date of MMRP including LTM:*** Indefinite

# Fort Richardson MMRP Schedule

(Based on current funding constraints)

AEDB-R #	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
FTRS-001-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
	LTM									204709
FTRS-002-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
	LTM									204709
FTRS-003-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
FTRS-004-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
FTRS-005-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
FTRS-006-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
FTRS-007-R-01	RI/FS									201509
	RD									201609
FTRS-008-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
	LTM									204709
FTRS-009-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
	LTM									204709
FTRS-010-R-01	RI/FS									201509
	RD									201609
	RA(C)									201709
	LTM									204709
FTRS-011-R-01	RI/FS									
	RD									201609
	RA(C)									201709
FTRS-012-R-01	RI/FS									
	RD									201609
	RA(C)									201709

***Prior Years Funds*****Total Funding up to FY04: \$250K**

<b>Year</b>	<b>Site Information</b>	<b>Expenditures</b>	<b>FY Total</b>
<b>FY05</b>		\$0K	\$0K
<b>Total Funding up to FY05: \$250K</b>			

***Current Year Requirements***

<b>Year</b>	<b>Site Information</b>	<b>Expenditures</b>	<b>FY Total</b>
<b>FY06</b>	SI FTRS-001-R-01	\$120K	
	SI FTRS-002-R-01	\$120K	
	SI FTRS-006-R-01	\$210K	\$450K
<b>Total Funding FY06: \$450K</b>			

***Total Future Requirements: \$84,247K******Total MMR Program Cost (from inception to completion of the MMRP): \$84,947K***

US Army Alaska (USARAK) established a Fort Richardson, Alaska Restoration Advisory Board (RAB) consisting of 12 community members, the Army, and personnel from the Alaska Department of Environmental Conservation (ADEC) and Environmental Protection Agency (EPA), Region 10. The RAB was established in October 1997, and has met quarterly since its inception. Community members represent academic institutions, the Army National Guard, the Fort Richardson community, an Alaska native tribe, a state/national environmental activist group, adjacent Elmendorf Air Force Base, and the Anchorage/Eagle River community at large.

The RAB regularly reviews available technical reports and offers written comments and recommendations concerning the Fort Richardson restoration program. Besides meetings, the RAB has also participated in site visits to Fort Richardson Operable Unit source areas and availed themselves of other environmental meetings and conferences publicized during RAB meetings and in quarterly fact sheets. Based on input from RAB members, the Army plans to reduce the frequency of the meetings to two meetings and one site visit per year.

Members from the local community, as well as RAB members, have also participated in public meetings regarding the release of CERCLA proposed plans for Fort Richardson Operable Units A, B, C, D and E. The Community Relations Plan was updated in 2004.

### ***Interest in the Technical Assistance for Public Participation (TAPP) Program***

The RAB has not expressed any interest in participating in TAPP to date.